CLAIMS

1.   A semiconductor device adapted to start by reading out a boot program from a data-rewritable nonvolatile memory, the boot program being stored in a plurality of blocks in the nonvolatile memory in parallel, the semiconductor device comprising:

    a CPU adapted to specify a read position for reading out the boot program stored in the nonvolatile memory at the starting time, and execute a starting process according to the read out program; and

    a read control circuit adapted to determine that a block corresponding to the read position is faulty or not according to data read out from the block, output the data to the CPU if the block is determined as not faulty, and read the data from another block storing the boot program and determine again whether the another block is faulty or not if the block is determined as faulty.

2.   The device according to claim 1, wherein the read control circuit is adapted to determine that the block is faulty or not faulty at least according to an error correction code contained in the data read out from the nonvolatile memory.

3.   The device according to claim 2, wherein the read control circuit corrects the data and supplies it to the CPU when it determines that the data is correctable data according to the error correction code and determines that the block is faulty when it determines that the data is uncorrectable data.

4.   The device according to claim 1, wherein the read control circuit is adapted

to determine that the block is faulty or not faulty at least according to a block state information contained in the data read out from the nonvolatile memory.

5.   The device according to claim 4, wherein the read control circuit determines that the block is faulty when the block state information does not show a predetermined value.

6.   The device according to claim 4, wherein the block state information is stored in a leading page of each of the blocks storing the boot program.

7.   The device according to claim 1, wherein the nonvolatile memory is a NAND type flash memory.

8.   A processing method for starting a semiconductor device comprising a CPU adapted to start by reading out a boot program from a data-rewritable nonvolatile memory, the boot program being stored in a plurality of blocks in the nonvolatile memory in parallel, the processing method comprising the steps of:

       reading out data from a block in the nonvolatile memory corresponding to a read position specified by the CPU at the starting time by means of the read control circuit of the nonvolatile memory; and

       determining that the block is faulty or not according to the data read out from the block, outputting the data to the CPU if the block is determined as not faulty, and reading data from another block storing the boot program and determining again whether the another block is faulty or not if the block is determined as faulty.